



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Birds seen on the dates after their names:

Owl, 5.	Belted Kingfisher, 2, 3, 7, 8, 12,
Hummingbird, 7, 8, 20, 28.	17, 20, 27.
Bobolink, 9, 12, 13, 17 to 20,	Crested Flycatcher, 2, 3, 4, 5.
22, 26, 27.	Yellow-throated Vireo, 8, 7, 14,
Cardinal, 22.	15, 17.
Cedarbird, 3, 18, 24, 26, 27.	Towhee, 2, 19 to 22, 24, 26.
Yellow Warbler, 9, 13 to 22,	Red-eyed Vireo, 1, 2, 3, 6, 15,
26, 27.	19 to 23, 25.
White-breasted Nuthatch, 4, 6,	Maryland Yellowthroat, 20, 21,
7, 9, 12, 13, 19, 20, 28, 29, 30.	22, 25, 26.
Purple Martin, 24, 25, 28, 29, 30.	Nighthawk, 19, 25.
Swamp Sparrow, 1, 14, 20, 21, 23.	Kildeer, 2, 4, 11, 12, 15, 17, 20,
Redstart, 2.	21, 22, 25, 26, 28, 29.
Long-billed Marsh Wren, 22.	Loggerhead Shrike, 2, 5, 14, 19,
	20, 21, 23, 26, 30.

Number of species seen each day:

June 1, 27	June 16, 27
" 2, 34	" 17, 35
" 3, 25	" 18, 34
" 4, 26	" 19, 37
" 5, 26	" 20, 39
" 6, 20	" 21, 35
" 7, 27	" 22, 37
" 8, 31	" 23, 30
" 9, 30	" 24, 31
" 10, 29	" 25, 35
" 11, 29	" 26, 38
" 12, 33	" 27, 35
" 13, 28	" 28, 35
" 14, 32	" 29, 35
" 15, 35	" 30, 34

Total number of species seen, 50.

Some *Thalictra* from North Dakota.

EDWARD L. GREENE.

The Eastern half of the State of North Dakota, lies well within our Midland Prairie Region. A little to the eastward of the very middle of the state there is presented a geographical feature of

considerable interest. Somewhat to the westward of the most conspicuous group of Dakotan lakes, of which Devils' Lake is largest, there exists a height of land, perhaps some fifty or a hundred miles in length, and possibly here and there almost as broad, which forms a natural barrier separating different water sheds. The trend of this very definite if not greatly elevated barrier is not quite meridional, but inclines to northwest and southeast, and from much below midway of it northward, the streamlets draining the elevation, if from the western slope flow to the Souris River, if from the eastern, to the Red River of the North; so that the major part of the whole drainage is, though by two separate and distinct main channels, tributary to Lake Winnipeg in the far North.

From the more southerly extension of the plateau the streamlets draining it all flow to the Missouri, whether they arise from the eastward or the westward slope of the elevation; and thus this southerly drainage has the Gulf of Mexico for its destination.

Such, in rude outline, is one topographic feature of central North Dakota; and guided by the maps only, the student of plant-evolution and distribution would expect this to be something of a land of promise for peculiar and unusual forms and phases of plant life. It is a region where four different floras might be expected to meet and mingle. To the southward of it lies the western and more arid extension of the great prairies as these occupy eastern and middle Kansas and Nebraska. To the northward are the very different steppes of Manitoba and Assiniboia. Eastwardly lie the alternations of prairie and woodland that make northern Minnesota a region peculiar as it is vast. As closely adjacent on the western side of the plateau is that flora of the northern Rocky Mountains which occupies Montana.

This, I say, is a peculiar district, where several extensive and well marked floras meet and mingle; or, putting the case differently, a kind of neutral ground whence radiate so considerable a number of different phytographic regions.

That this middle section of North Dakota really is such a phytographically neutral ground has been impressed on my mind strongly by the examination of not a few botanical specimens that have been sent me from there for examination within the last five or six years. Whatever the family or the genus into which sendings fall, I have almost invariably found it difficult, and commonly quite impossible, to name conscientiously the species; this even in such familiar genera

as *Aster* and *Solidago*. Everything has seemed rather notably different from what would be specifically the same thing if it had come from the farther East, or the remoter West, or even from the prairies of Wisconsin, or Iowa or Minnesota.

Not very long since I asked of my friend Dr. J. Lunell, for some time a resident of this interesting region, that he would send me specimens of such *Thalictrum* species as he had collected in North Dakota. Of the specimens which he kindly and promptly sent, there are two which represent species hitherto undescribed; and I more than willingly present herewith my determinations of them all. And when I say more than willingly, I imply that it may be, and ought to be, more than a pleasure to investigate critically any part of any floral district standing thus by geographic limitations aloof from several others, and nothing less than the duty with him who has done so, to make known in how far, and in what manner of specific or varietal departures from more familiar types the membership of each well known genus then presents itself.

THALICTRUM DIOICUM Linn. Under his number 79, Dr. Lunell sends two beautifully prepared specimens from "Thickets, Peninsula of Lake Ibsen, Benson County, 13 June, 1909." I assume that some one of Dr. Lunell's correspondents has referred these specimens to *T. occidentale* for this is the name written on the label. The two specimens belong to different species, and neither is *T. occidentale*. A small plant, not yet in flower, or even in well developed bud at the date, is plainly *T. dioicum*. Its height is only a foot. Its leaves are two only, and both arising from the lower part of the stem. The leaflets are ample and very thin. They are much broader than long, of a semiorbicular outline, and are beautifully and doubly crenate-lobed, all the secondary lobes being equal and very obtuse. These are precisely the marks by which anyone conversant with vegetative characters in this genus recognizes *T. dioicum* when not in fruit. I speak of the species in its broader sense; for this Dakota plant, when its fruit becomes known, might easily prove more or less distinct from the East Canadian type of *T. dioicum*.

Now the second specimen before me under Dr. Lunell's number 79, is not at all the same plant as the other. It is in full flower, or even a little past that stage, at the moment when the other is hardly yet showing its buds. It is much larger, also has numerous leaves up and down its stem, and in the pattern of its leaflets it is altogether diverse from *T. dioicum*. What it is we shall not be like-

ly to ascertain until we have other and more complete specimens, with mature fruit.

***Thalictrum thyrsoideum* nov. sp.**

Planta inter affines humilis, 2—3 dm. alta, caule simplici rigidiusculo, leviter anguloso-striato, sparse folioso, in inflorescentiam nudam subconfertam et thyrsiformem terminante. Folia plerumque 3, non ampla, breviter petiolata; foliola firmiter membranacea, parvula, 11—13 mm. lata, suborbicularia aut interdum late subcuneato-obovata, supra medium 3-loba, lobis 2—3-crenatis, supra glauco-viridia, subtus glauca, utrinque minutim reticulato-venulosa. Sepala maris late ovalia, obtusa, albicantia vel interdum purpurascantia. Sepala feminei iis maris dimidio minora, magis herbacea. Antheræ lineari-oblongæ, acuminatæ. Achenia oblique oblongo-elliptica, sessilia.

This small species inhabits dry prairie about Leeds, where it comes into flower late in May, maturing its fruit early in July. Dr. Lunell has distributed it under the name of *T. venulosum*, but the plant lacks the characters of that species, its leaves being thin and not at all "rugose-veiny" even beneath. Its achenes are nearly twice as long as in that species and much narrower.

The plant which *T. thyrsoideum* most resembles is my *T. campestre* belonging to the high grassy plains of Manitoba and Assiniboia, which is very prominently veiny beneath, and has also the ovate achenes attributed to *T. venulosum*.

***Thalictrum Lunellii* nov. sp.**

Planta dioica fere metralis, caule laete viridi, laevi, glaberrimo, folioso, foliis peramplis; folia omnia subsessilia, pagina superiore saturate viridia, inferiore glauca; foliola magna 4-cm. longa, 3—5 cm. lata, basi et obtusa et subcordata, supra medium late et inequaliter, nec profunde, 7-9-loba, lobis brevibus latissimis obtusis, saepissime cuspidato-mucronatis. Achenia 5-8, brevia, crassiuscula, vix compressa, oblique ovalia, circa 6 mm. longa, apice acuta, turpide 8-costata.

This fine species, belonging to the group *T. dioicum*, *confine* and *occidentale*, was collected in July of this year (1909), in moist thickets of the Souris River near Minot, North Dakota, by Dr. J. Lunell.

Any one acquainted with the geography of North American botany would naturally expect that a new *Thalictrum* from the

Souris Valley would by character indicate relationship to some Rocky Mountain species like *T. Fendleri*, rather than to any member of the genus which is of the remoter Atlantic or Pacific slope of the Continent. But *T. Fendleri* has definitely compressed achenes, with comparatively thin pericarp, of peculiarly oblique or one sided outline; and the nearest kindred of our new type from North Dakota, are the species first mentioned. It is not in near contact with *T. occidentale*, a species of Vancouver Island and adjacent coastal regions, for that, according to Dr. Gray who first published it, has slender achenes a half-inch long. The short plump achenes of *T. Lunellii* proclaim its nearer affinity for *T. confine* of extreme northern New England; from which the Dakotan species differs by its larger, comparatively thicker, and quite turgescient achenes, as well as by its ample foliage of large leaflets quite differently cut.

***Thalictrum vegetum* nov. sp.**

Planta e grege *T. polygami*, illi magis vegeta, licet humilior. Caulis atrovirens, striatus, fere usque ad inflorescentiam foliosus, apicem versus pilis brevibus plus minus appressis sparsim obsitus. Folia caulina ampla, circa 3 dm. longa, petiolis leviter, petiolulis magis crebre, hirtellis; foliola maxima, saepissime 5—6 cm. longa; circumscriptione late obovata supra medium late trilobata, lobis obtusis, plerumque integris, mediano interdum inaequaliter trilobo; foliolorum textura membranacea, pagina superiore saturate glauco-viridi, sparsim pubigera, inferiore glauca et plus minusve tomentulosa. Filamenta alba licet basi capillaria, et omnino pendula; anthera linearia, fere aequae longa ac filamenta, acute mucronata: panicula fertilis contracta, ramulis, pedicellis calycibusque pilosiusculis. Achenia immatura breviter hirtella.

The specimens of this new ally of *T. polygamum* were collected in the years 1902 and 1905, at Devil's Lake, North Dakota, by Dr. J. Lunell, who remarks that this plant comes into flower from four to six weeks later than the other *Thalictra* of this region. All his specimens were taken in July; and those of the fertile plant with fruit not yet mature, were gathered in the middle of that month.

The points of contrast between this and our southern *T. polygamum* are several and well marked.

The plant of the Middle States and southward, while often gigantic in stature—frequently six and seven feet high—is in as-

pect quite thin and spare, because the foliage is remarkably small and far apart, and the flowering branches are equally remote, and are almost horizontally spreading. Thus what one must technically denominate the panicle of *T. polygamum* is sometimes a yard high and almost two feet wide, and so loose and open as seem no panicle at all. At an opposite extreme from this is the small congested panicle of *T. vegetum*, while its yard high stem is closely invested with ample leaves, the single leaflets about two inches long and very broad. On such very marked vegetative differences alone, in default of other characters, the two species would be held distinct, without need of mentioning that the southeastern plant is glabrous, the northwestern one pubescent. But while the stamens of all Eastern *T. polygamum* consist of a firmly upright clavate filament and a very short merely oval anther, those of *T. vegetum* have filaments which are capillary and therefore pendulous, the anthers being thinner, and of four times the length of those of the eastern ally.

The pubescence of this plant of North Dakota, extending as it does to the calyx, and even to the carpels, might cause one to question whether this might not be the long neglected and forgotten *T. dasycarpum*. This particular species has been recently a subject of careful field study by me in its native wilds; for it is plentiful in southern Michigan and far eastward into Ontario, where it seems to take the place of the real *T. polygamum* of the Middle States. Though a small plant compared with that, *T. dasycarpum* has the floral characters not at all of the northwestern *T. vegetum*, but of *T. polygamum*; that is to say, its filaments are clavate and erect and bear short oval anthers, all as in the southeastern species, from which it is distinguished as well by its different habitat and small size, as by its pubescent foliage, pilose pedicels and sepals, and more or less hairy carpels.

Though truly and thoroughly akin to *T. polygamum* there is nothing in the specimens of *T. vegetum* that are before me to indicate that the species is other than dioicous; but further observation in the future may possibly reveal it as more or less polygamous.

Washington, D. C.